

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH

Weekly



Bulletin

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Entered as second-class matter February 21, 1922, at the post office at Sacramento, California, under the Act of August 24, 1912.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917.

Vol. VI, No. 29

August 27, 1927

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INSECTS AND COMMUNICABLE DISEASES.

There are a great many kinds of insects that are responsible for the transmission of a great many different communicable diseases. This article, however, will deal only with some of those insects that may constitute a menace to the comfort and health of persons who go on camping trips or summer outings in the western part of the United States. Flies and mosquitoes cause more discomfort and illness to campers than any other insects. Their life habits are radically different, however, and the damage which they produce is of a different type. The common fly is chiefly a carrier of infection by mechanical means. It picks up infectious material on its feet, carrying it to foodstuffs which may be eaten by human beings, thus producing illness in the individual. The mosquito, on the other hand, bites the human being and may thus inoculate him with a communicable disease. The man who originated the slogan "swat the fly" did a great deal in the education of the public regarding the fly menace, but if this slogan had provided more definite information in the prevention of fly breeding, it would have accomplished much more. Merely killing every fly that one sees does practically nothing in the elimination of these tormenting pests.

The fly menace in our cities, since the automobile has displaced the

horse, is a matter of little concern, generally speaking. In the rural districts where little or nothing is done in the control of these insects the fly problem is a matter of great importance. The source of the common fly, as a real menace, is in the horse manure pile, for it is here that most of such flies are bred. Kitchen refuse, garbage dumps, decaying fruit, and any organic material that is in a state of beginning decomposition provide ideal breeding places for flies. Campers who fail to bury garbage are almost certain to be bothered with flies. They should also make proper disposition of all other wastes, especially body wastes, for it is in such waste products that the organisms which cause disease are chiefly found. Typhoid fever and dysentery are the principal diseases that are transmitted by flies. Since many persons who are apparently well are carriers of the organisms that cause these diseases it is of great importance that all waste products be buried quickly and buried deeply, in order that no insects may be able to gain access to them.

The most troublesome insect pest to campers is the mosquito, and in districts where malaria is found, the mosquito produces a vast amount of harm through its role in the transmission of this disease. It is a pest and disease carrier. Samuel Hopkins Adams, the American author, calls them "our favorite murderers." He has said "The mosquito is one hun-

dred per cent a detriment. It is a public nuisance and a private torment. It is a danger to health, a depreciator of real estate, a drawback to industry, and an economic liability. Elimination of it is not only cheap but actually profitable." In many communities throughout western states a vast amount of work is being accomplished in the eradication of mosquitoes on a large scale. There are many places, however, where no control measures are in effect, and the camper who visits such districts should be prepared to protect himself against mosquitoes.

Not all mosquitoes transmit malaria. The female of the anopheles species only, is responsible for the transmission of the disease. Nearly all types of adult mosquitoes of this species may be distinguished by their spotted wings. They may also be distinguished by their peculiar position when resting or biting, the body taking an almost perpendicular position with reference to the surface, making it appear as if the mosquito were standing upon its head. Other mosquitoes assume a humped-up position. This principal malaria-bearing mosquito of western states is a persistent pest and is readily recognized by the four black spots on each wing, caused by thick patches of black scale. The tip of the wing has a brassy reflection in its fringe. Anopheles mosquitoes seldom bite in the day time and rarely attack a person who is moving about. During the first warm days of early spring, however, the female anopheles emerge from their winter hibernation quarters and bite at any time of day, even in the brilliant sunshine, which they do not later in the season. The favorite breeding places of this species of mosquito are found in quiet, grass-bordered pools and ponds, but this insect is frequently found in the seepage from irrigation ditches and in the ditches, as well, when the vegetation becomes very dense. Sometimes it will breed in artificial containers, and it has been known to breed in brackish waters. Ordinarily, however, it is rather fastidious, and prefers clear, fresh water.

There are many other types of mosquitoes in western states, which are extremely pestiferous and their bites may be extremely painful. The salt marsh mosquitoes are particularly aggressive, causing the keenest sort of discomfort to campers. While the bites of the anopheles mosquito may produce malaria, the bites of most other types found in the western states

are seldom serious in themselves. They may lead to blood poisoning through scratching with the finger nails in an attempt to relieve the irritation, which is very often intense. To relieve the irritation, ammonia, glycerine, alcohol or iodine may be applied. An application of moist toilet soap is also said to be effective in affording quick relief. Touching the bites with ordinary moth ball is also said to be effective. A weak solution of carbolic acid—about 2 per cent—is also useful in stopping the itching of a mosquito bite. Campers who visit districts where mosquitoes abound should carry a sufficient supply of ordinary mosquito bar in order that they may be protected against the attacks of these insects. This offers the best sort of protection.

Repellents such as oil of citronella, oil of lavender, or oil of cedar, may be effective for a short time, but if they are applied early in the evening the odor evaporates within a short time and is of no use in repelling the insects during the later hours of the night. Persons who desire to take a repellent with them on a camping trip will probably find the following mixture to be of value:

Take one and one-half parts of oil of citronella, one part of coal oil, two parts of cocoanut oil, to which add one per cent of carbolic acid. This may be rubbed on the hands and face or it may be sprinkled lightly on a towel which is suspended near the camper's head.

These measures for the use of the camper are merely for temporary use. In those communities where mosquitoes are pests, permanent methods for the control of the insects should be undertaken. Full information upon this subject may be obtained by writing to the California State Department of Public Health, Sacramento.

Wood ticks are exceedingly dangerous in some parts of some western states, where a severe disease known as Rocky Mountain spotted fever is transmitted by these insects. Very often in walking through shrubs and brush, wood ticks are able to transfer themselves from the foliage to the clothing of the individual. Their presence may not be known until the tick has burrowed its head through the skin of the victim and has begun to engorge itself with rich, red blood. The application of a little oil will help to remove the tick, as it will cause the insect to loosen its hold. Almost any kind of oil may be used for this purpose. Care should be used

in removing the insect in order to make certain that the head is not left buried in the tissues. The business of removing the insect should be done slowly, carefully and painstakingly. The wound may be disinfected with a weak solution of carbolic or iodine.

Flies, mosquitoes and ticks are the chief sources of insect discomfort to campers in the western states. There are many other insects that may bite and make themselves decidedly troublesome, but the three insects mentioned are those that cause most of the disease and discomfort incidental to life in the open.



Interesting Program For Health Officers.

The committee on program for the Nineteenth Annual Conference of California Health Officers, to be held in Sacramento, September 19th to 22d, is working to develop an interesting series of papers for presentation at this meeting. It is planned to make the Sacramento sessions different from similar meetings of the Health Officers' Section held in past years. One of the new features is a question box. Written questions may be submitted by health officers during the early sessions of the conference. Answers will be prepared by committees to be appointed and will be given out on the last day. This will provide an opportunity for any health officer who has a knotty problem on his hands to secure special information from other health officers who are in attendance. Submission of written questions will eliminate all haphazard opinion in the replies and will make for soundness in the information given.

Poliomyelitis, its diagnosis, treatment and control occupies an important position upon the program as tentatively arranged. Malta fever and Rocky Mountain spotted fever, two diseases that are now being reported from opposite ends of the state, will be discussed by men who are experts in the etiology and control of these more unusual diseases. There will be a joint session with city engineers at which garbage and sewage disposal will be discussed. There will also be a joint session with public health nurses. Full opportunity for health officers to attend the general sessions of the League of California Municipalities will also be provided.

Every health officer in the state should make special effort to attend

this conference. The central location of Sacramento makes it comparatively easy of access from every section of the state. Unusually good facilities for conventions are now available in Sacramento and the entertainment features to be provided will make the 1927 conference long to be remembered.



Dr. Kelly Is Oakland Health Officer.

Dr. Frank L. Kelly, for many years connected with the California State Board of Health, now assistant professor of public health in the University of California at Berkeley, has been appointed city health officer of Oakland, vice Dr. Harry E. Foster. Dr. Kelly has been engaged, primarily, for the purpose of reorganizing the Oakland health department, and his appointment is not permanent.



God could not be everywhere therefore
He made mothers.—Jewish proverb.



MORBIDITY.*

Diphtheria.

55 cases of diphtheria have been reported, as follows: Berkeley 1, Oakland 9, Colusa 1, Los Angeles County 8, Alhambra 1, Glendora 1, Long Beach 1, Los Angeles 18, Sausalito 1, San Bernardino County 2, Rialto 1, San Diego 1, San Francisco 4, San Mateo County 2, Redwood City 1, Santa Clara County 2, Visalia 1.

Measles.

43 cases of measles have been reported, as follows: Alameda 1, Berkeley 2, Oakland 5, Chico 1, Colusa 1, Lassen County 1, Los Angeles County 9, Alhambra 1, Glendale 1, Glendora 1, Long Beach 1, Los Angeles 2, Sierra Madre 1, Salinas 1, Orange County 1, Newport Beach 1, Riverside 1, Sacramento 2, San Bernardino County 1, National City 1, San Diego 1, San Francisco 5, Arroyo Grande 1, San Luis Obispo 1.

Scarlet Fever.

48 cases of scarlet fever have been reported, as follows: Alameda 2, Berkeley 2, Oakland 4, Humboldt County 3, Los Angeles County 10, Long Beach 3, Los Angeles 6, Hawthorne 1, Fullerton 1, Santa Ana 1, La Habra 1, Sacramento 1, San Francisco 5, San Joaquin County 3, Stockton 1, San Mateo County 1, Santa Clara County 1, San Jose 2.

Smallpox.

5 cases of smallpox have been reported, as follows: Alameda County 1, Sacramento 3, California, 1.

Typhoid Fever.

16 cases of typhoid fever have been reported, as follows: Fresno County 2, Eureka 1, Los Angeles County 1, Los Angeles 4, Madera 1, Santa Ana 1, Plumas County 1, San Francisco 1, San Joaquin County 3, Tulare 1.

From reports received on August 22d and 23d for week ending August 20th.

Whooping Cough.

155 cases of whooping cough have been reported, as follows: Alameda 18, Berkeley 17, Oakland 36, Los Angeles County 8, Huntington Park 2, Los Angeles 23, Pasadena 5, San Diego 31, San Francisco 6, Burlingame 1, Santa Barbara County 2, Santa Barbara 1, Palo Alto 5.

Meningitis (Epidemic).

4 cases of epidemic meningitis have been reported, as follows: Alameda 1, Fresno County 1, Los Angeles 1, San Francisco 1.

Poliomyelitis.

44 cases of poliomyelitis have been reported, as follows: Alameda 2, Berkeley 1, Oakland 2, Butte County 1, Orland 2, Kern County 6, Bakersfield 1, Los Angeles County 1, Long Beach 4, Los Angeles 1, Monterey Park 1, Monterey County 2, Salinas 1, Napa County 1, La Habra 1, Sacramento County 1, North Sacramento 1, San Francisco 5, San Joaquin County 1, Stockton 1, Santa Clara County 2, Santa Cruz 1, Siskiyou County 1, Vallejo 1, Sonoma County 3.

COMMUNICABLE DISEASE REPORTS.

Disease	1927				1926			
	Week ending			Reports for week ending Aug. 20 received by Aug. 23	Week ending			Reports for week ending Aug. 21 received by Aug. 24
	July 30	Aug. 6	Aug. 13		July 31	Aug. 7	Aug. 14	
Anthrax	0	0	0	0	0	0	0	0
Botulism	0	0	0	0	0	0	1	0
Chickenpox	88	62	30	34	46	35	32	57
Diphtheria	77	74	71	55	96	87	58	46
Dysentery (Bacillary)	3	0	0	0	12	0	1	2
Encephalitis (Epidemic)	1	2	2	0	2	2	0	1
Gonococcus Infection	85	150	90	134	96	105	244	91
Influenza	3	2	6	3	1	11	3	4
Jaundice (Epidemic)	0	0	0	0	1	0	0	0
Leprosy	2	0	0	0	0	0	0	1
Malaria	3	0	4	1	0	6	2	1
Measles	78	60	51	43	161	123	104	86
Meningitis (Epidemic)	5	6	2	4	1	4	4	1
Mumps	29	39	32	28	51	42	46	51
Paratyphoid Fever	0	1	1	1	2	2	1	0
Pneumonia (Lobar)	39	30	20	25	61	26	25	19
Poliomyelitis	65	59	74	44	5	5	3	7
Rabies (Animal)	6	1	3	3	7	8	5	4
Rabies (Human)	0	0	0	0	1	0	1	0
Rocky Mt. Spotted Fever	0	0	1	0	0	0	0	0
Scarlet Fever	59	68	41	48	60	56	41	47
Smallpox	7	7	6	5	17	11	20	4
Syphilis	84	178	106	129	78	169	144	97
Tetanus	1	0	1	2	2	4	1	1
Trachoma	0	0	0	2	1	1	4	1
Trichinosis	0	0	0	0	0	0	0	0
Tuberculosis	214	194	169	248	202	205	155	190
Typhoid Fever	23	16	25	16	32	33	30	21
Typhus Fever	0	0	0	0	0	0	0	0
Whooping Cough	132	134	161	155	83	41	68	24
Totals	1004	1083	896	980	1018	976	993	756

COMMUNICABLE DISEASES BY AGE GROUPS—JULY, 1927.

Disease	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55+	Adult
Chickenpox	20	121	157	29	16	11	15	10	2	1	11
Diphtheria	3	63	73	28	16	15	18	13	6	2	6
Food Poisoning		4	1	2	3	8	7	11	5	3	18
German Measles	1	10	11	5	5	6	2	2		1	
Gonococcus Infection	4	3	9	5	51	128	115	36	10	2	6
Measles	21	177	196	66	26	12	13	10	4	1	10
Meningitis	2	5		1	4	1	3				1
Mumps	1	17	52	26	6	9	6	1	2	1	24
Pneumonia	6	17	6	4	4	1	10	20	10	25	1
Poliomyelitis	4	56	56	44	33	11	10	2	1		
Scarlet Fever	1	52	102	34	10	6	30	3	1		3
Smallpox	1	3	6	6	2	2	2	6	12		3
Syphilis	7	1	2	4	28	60	119	97	65	32	3
Tuberculosis	4	28	33	29	54	99	217	155	80	65	9
Typhoid		2	12	19	9	5	13	7	7	5	1
Whooping Cough	71	309	177	10	4	2	7	2		1	2